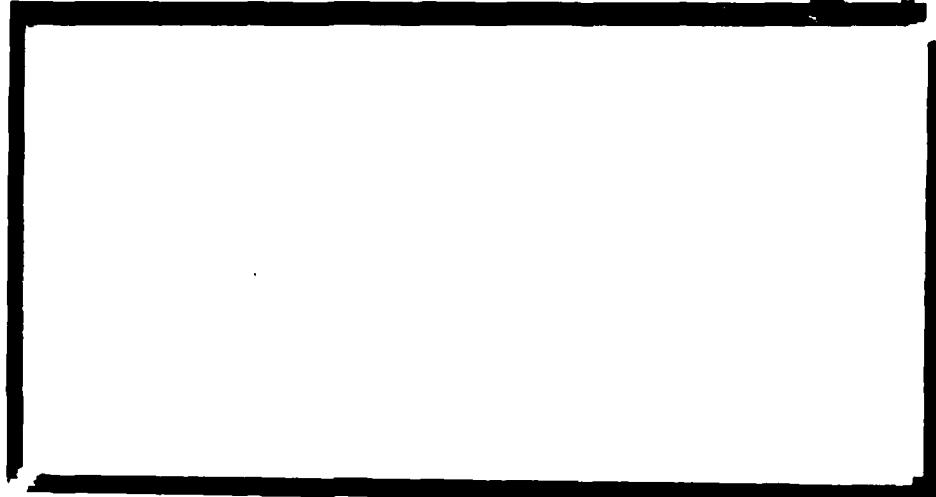


AD A101668

LEVEL  
**PERSONNEL TECHNOLOGY**

12  
**AN EXAMINATION OF HISPANIC AND GENERAL POPULATION  
PERCEPTIONS OF ORGANIZATIONAL ENVIRONMENTS**  
(Harry C. Triandis, Principal Investigator)

DTIC  
JUL 21 1981



DEPARTMENT OF PSYCHOLOGY  
UNIVERSITY OF ILLINOIS  
URBANA-CHAMPAIGN, ILLINOIS 61820

Prepared with the support of:

The Organizational Effectiveness Research Programs of the Office of Naval Research  
(Code 452) under Contract N 00014-80-C-0407; NR 170-906

FILE COPY  
BMS

Reproduction in whole or in part is permitted for any purpose of the United States Government. Approved for Public Release; Distribution unlimited

DISTRIBUTION STATEMENT A	
Approved for public release; Distribution unlimited	

81721020

12



SOME DIMENSIONS OF INTERCULTURAL VARIATION AND THEIR  
IMPLICATIONS FOR INTERPERSONAL BEHAVIOR

Harry C. Triandis  
University of Illinois  
Champaign, Illinois 61820

Technical Report No. 2

May, 1981

DISTRIBUTION STATEMENT A

Approved for public release;  
Distribution Unlimited

**Unclassified** SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

**REPORT DOCUMENTATION PAGE**

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER No. 2	2. ACCESSION NO.	3. SECURITY CLASSIFICATION
4. TITLE (and subtitle) Some Dimensions of Intercultural Variation and their Implications for Interpersonal Behavior.	5. TYPE OF REPORT & PERIOD COVERED Internal <input checked="" type="checkbox"/>	
6. AUTHOR(s) Harry C. Triandis	7. CONTRACT OR GRANT NUMBER(s) N 00014-80-C-0407	
8. PERFORMING ORGANIZATION NAME AND ADDRESS Department of Psychology, University of Illinois 603 E. Daniel, Champaign, IL 61820	9. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS NR 170-906	
10. CONTROLLING OFFICE NAME AND ADDRESS Organizational Effectiveness Research Programs Office of Naval Research (Code 452) Arlington, VA 22217	11. REPORT DATE May 1981	
12. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office) 12159	13. NUMBER OF PAGES 34	
14. DISTRIBUTION STATEMENT (of this Report) Approved for public release; distribution unlimited. Reproduction in whole or in part is permitted for any purpose of the U.S. Government.	15. SECURITY CLASS. (of this report) Unclassified	
16. DISTRIBUTION STATEMENT (of the abstract entered in Block 16, if different from Report)	17. DECLASSIFICATION/DOWNGRADING SCHEDULE 21 1981	
18. SUPPLEMENTARY NOTES		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) Culture Cross-cultural training Social behavior	Values Modernity Cultural Complexity	
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) A review of a broad literature suggested certain dimensions of cultural variation that influence social behavior. Table 1 shows these dimensions. Table 2 shows how these dimensions are related to higher order dimensions of cultural complexity, modernity, and modern complexity. The proposed theoretical framework suggests numerous hypotheses that require empirical investigations, suggests how diverse publications can be integrated.	(over)	

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 68 IS OBSOLETE  
S/N 0102-LF-014-6601

Unclassified 4-5-94  
SECURITY CLASSIFICATION OF THIS PAGE (When Data Enclosed)

(cont'd.)

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

20. (Continued)

proposes ways to develop episodes of social interaction that can be used in culture assimilators that will not focus on particular cultures but train a person to think about the range of variations in the dimensions of cultural variation that are likely to be important in interaction with persons from other cultures.

Accession For	
NTIS GRAIL	<input type="checkbox"/>
DTIC TAB	<input type="checkbox"/>
Unannounced	<input type="checkbox"/>
Justification	
By	
Distribution/	
Availability Codes	
Avail and/or	
Dist	Special
A	

S/N 0102-LF-014-6601

Unclassified

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Some Dimensions of Intercultural Variation and their Implications  
for Interpersonal Behavior<sup>1</sup>

Harry C. Triandis

University of Illinois at Urbana-Champaign

While cultural differences in social behavior are known to travelers, anthropologists, and cross-cultural psychologists, there is no generally accepted systematic way of thinking about such differences. In this essay I will attempt to provide a framework for thinking about cultural differences in social behavior and their implications.

A framework such as I will describe can have several functions. First, it can stimulate research. As will be apparent when reading this paper, I raise many more questions than I answer. In a lot of places I say "this may be related to that." This is obviously a primitive hypothesis, needing empirical examination. Second, it can be used as a method for the classification of existing information about culture and social behavior. Many ethnographies include such information, but it is presented unsystematically. One cannot compare easily across ethnographies because they do not discuss the same issues. One cannot summarize the literature because the ethnographies often do not discuss the dimensions that one needs. For example, when my colleague, Judy Lissansky, undertook to summarize the vast literature concerning Hispanics in the United States she did not have a set of categories that could be used to do a content analysis of this literature. This paper was written primarily to suggest such a set of categories. Third, if the dimensions of the framework are valid they can be used to construct episodes of social interaction in which persons from two cultures experience interpersonal difficulties and misunderstandings. A general set of such episodes would be most valuable in the development of culture

assimilators (Triandis, 1976). The first step in the development of assimilators is identifying a set of episodes that describe interpersonal difficulties and misunderstandings. If we can construct a general set of such episodes, illustrating the various dimensions of the proposed framework, we can eliminate the first step in the construction of assimilators.

Before presenting the framework, it is important to make three points:

First, when we claim that a cultural group has some attribute we obviously do not mean that everybody in that group has it or has it to the same degree. For example, when stating that France is Roman Catholic we do recognize that there are substantial numbers of Protestants, Jews, Agnostics, Atheists, Anti-Clerics, and others, not to mention members of all other religions of the world, as one would find in most cosmopolitan cities such as Paris or New York. All we mean to imply is that large numbers of the French are Catholic. Thus, if I meet a Frenchman and I assume that he is Catholic I am likely to be wrong less frequently than if I assume anything else.

Second, the examination of cultural differences in social behavior faces a problem very similar to that faced by linguistics: variation is immense. But, there are certain patterns of language, certain universals (Greenberg, 1963) which permit generalizations that simplify this variation. Science is the discovery of similarities in observed differences. We must extract patterns where chaos is apparent. It is in this sense that the dimensions of cultural variation that are presented below must be viewed. They are meant to apply to all cultural groups in the world, much as Verb, Subject, Object are useful categories for the analysis of languages. Variation occurs in language structures, when languages use different sequences of these three elements, such as SOV, SVO, etc.

Similarly, cultural differences are implied by the presence of different combinations of value on the dimensions to be presented. Even a very crude characterization of "high vs low" on a given dimension, implies considerable variation, since n dimensions will provide  $2^{n-1}$  patterns. The proposed dimensions can accommodate several million patterns so that even the most extreme proponents of cultural differences should be satisfied with that much variety!

Third, an ideal in the scientific analysis of culture and social behavior is to stop referring to cultural groups (e.g. the French or the Triobrianders) and refer to dimensions. This eliminates the possibility of stereotyping. However, before we can reach this ideal we must collect data from persons who are in particular geographic locations, at particular times, and speak a particular language. It is convenient, for the time being, to use ethnic labels.

The framework is based on a review of the literature. Numerous dimensions have been suggested by various authors. It is not always clear whether the dimensions that are conceptually similar are the same, since different ecological and historical factors may be antecedent of dimensions that otherwise seem similar, and different behavioral consequences may be linked to dimensions that seem similar. Conversely, dimensions that seem different may be demonstrated empirically to be linked or even to be identical. After struggling with these problems for about 18 months, I have settled on a number of dimensions that appear reasonably distinct, but linked conceptually in meaningful patterns. Whether this is the best way to conceptualize the framework is something that only empirical work can determine. Furthermore, such work should distinguish studies that test individuals from studies that measure attributes of cultures. The very same dimension can be examined at the level of individuals,

providing "individual validity" studies, and at the level of cultures (i.e. means of individual responses for each culture with correlations across a sample of cultures), providing "ecological validity" studies. Hofstede's data (1980) show that the two kinds of validity can be quite different.

In organizing the dimensions into a coherent pattern it is convenient to ask some basic questions:

1. What perceptual differentiations do people make in a given culture? That is, when they interact with another person, what characteristics do they emphasize?
2. How do people deal with the information they extract from these differentiations?
3. What do people do when interacting with each other?

In many cases there is a correspondence between these three domains. For example, people who differentiate on sex (i.e. always notice that the other person is male or female) have ways of organizing information which strongly segregates "male" and "female" conceptions (e.g. norms, values, beliefs), and behave very differently when the other person is a male or a female.

The framework consists of 17 dimensions of variation and three super-dimensions. Table 1 lists them. Be sure to read the note of Table 1 to understand how the dimensions were numbered. Each dimension is first presented conceptually. Then, empirical evidence from a variety of sources is used to support the existence of the dimension. Speculations are then offered about the possible origins of the dimension.

In order to provide maximum clarity, the paper uses as examples summaries of episodes from a culture assimilator constructed by Albert (1978) to train North Americans to understand Latin American culture and

a culture assimilator designed to instruct Americans about Greek culture (Mitchell, et al, 1969). Assimilators are designed to help a trainee assimilate the point of view of another culture so that the trainee develops a broader framework for thinking about social behavior (see Triandis, 1976). The construction of the Albert assimilator was based on responses obtained from Hispanics and "Anglos." Specifically, stories involving Anglo-Hispanic interactions were obtained through interviews with persons having contact with the other culture. Subsequently, attributions about the causes of the behavior of a particular actor in the story were obtained. When statistical tests indicated that Hispanics see one and Anglos see another attribution (presented in paired comparison format) as "correct" in explaining the behavior of the actor, we used that information in constructing the assimilator.

Evidence obtained from the construction of assimilators is but one of the kinds of data used in the present paper. Other data are extracted from the work of Hofstede (1980) and Glenn (1981) as well as from earlier studies (Triandis, 1972, 1976). An attempt was made to keep the examples focused on Mediterranean culture (Greece, Latin America) versus North European and North American culture (Scandinavia, Anglo-Saxons) because this contrast provides examples of the greatest utility to readers from Europe and America. In some cases, however, studies done in Asia or Africa were employed. The empirical basis of the above mentioned studies is extensive. For example, Hofstede used 117,000 questionnaires from 40 countries; my own studies employed several hundred subjects from each of several countries (Germany, Greece, India, Japan and the United States) as well as hundreds of subjects from American subcultures (e.g. blacks, whites). In other cases the information was obtained from ethnographic reports.

### Dimensions of Variation

#### What Perceptual Differentiations are Made?

Members of cultures differ in the extent to which they pay attention to different characteristics of other persons. Among the characteristics that are commonly used to differentiate are race (see Triandis, 1967, for a review), age, sex, social class, language, tribe, religion and family. In some cultures distinctions along such dimensions are made very strongly, so that there is a polarization of qualities. For example, men are seen as very different from women; high status persons as very different from low status persons, blacks as very different from whites, and so on. In cultures that polarize strongly there is little inclination to perceive others in shades of gray: others are either pure or defiled, respected or not respected, with honor or shame, e.g. see the Catholic/Protestant conflict in Northern Ireland.

Strong differentiation by race is found in South Africa, as well as in the United States; by age in most traditional cultures, e.g. in India; by sex, in Japan and Latin America; by social class in most Latin countries; by language in Canada, Belgium, India and elsewhere; by tribe in many parts of Africa; by religion in most Islamic countries.

#### (XVII) What the Other Does vs What the Other Is

This dimension was discussed by Parsons, and is well known in the literature. It requires no explanation.

#### (XV) Ingroup-Outgroup Definitions

A person defines certain people as trustworthy, and worthy of cooperation or even self-sacrifice for, and other people as untrustworthy and not worthy of self-sacrifice for. The size of such groups can be small (e.g. family) or large (mankind), though most people employ some intermediate-size group (e.g. tribe, nation). The boundaries of such groups may be

easy to penetrate (e.g. if one is a friend of an ingroup member one becomes an ingroup member) or difficult (one may have to be a relative, so that to develop interdependence one needs to redefine the relationship, as happens in certain tribes where the anthropologist is adopted by some member of the tribe and becomes a ritual relative of that person). The comadrazgo system in Latin America is a means of enlarging the ingroup.

Familism is a case of strong identification with the family, and little concern for others outside of it. In cultures high in familism the person's main loyalty is to the family, which includes not only direct relatives but also ritual relatives (e.g. comadrazgo in Latin America). Respect and honor of the family are of central concern; fulfillment of family roles is the most important purpose of life; people are evaluated in terms of their family (is their family high or low in status? respectable or non-respectable?). The bond of parent and child is stronger than any other bond, and exceeds the bond of spouse to spouse. Cultural variations may occur between the relative importance of the father-son, mother-son, father-daughter or mother-daughter bonds (Hsu, 1971) but the parent-child bond is unbreakable. A person becomes adult only after marriage. Until marriage he or she is defined as a child. Socialization occurs primarily in the family rather than in school. Interpersonal relationships within the family are very good, with self-sacrifice often present; by contrast relations with outgroup members are very poor. There are few, if any, organizations outside the family that function well. So, in high familism cultures voluntary associations (such as the boy scouts, United Way, etc.) do not function well.

Cultures low in familism are characterized by de-emphasis of the above mentioned traits. The spouse-spouse relationship is all powerful. When the children leave the home they are "adults," and are supposed to take

care of themselves. Outside institutions such as the school are charged with important socialization functions. Voluntary organizations function well.

Dyadic relationships develop in addition to the relationships among family members. Special dyadic relationships such as those found between persons of equal status, or patron and client, or a person and a supernatural are especially interesting. There is a series of exchanges, where what is given never matches exactly what was received, so that the relationship goes on in time, since there is no way to end it by paying back exactly for what one has received (Foster, 1967).

Familism is found very widely in the Mediterranean countries, and Latin America. However, some forms of it can also be found in most traditional societies, particularly in Asia.

Albert's assimilator has several items that reflect familism. She makes the point, in one of them, that Latin American families play the role that social agencies play in North America.

#### (IX) Age Differentiation

In many traditional societies age is a major factor in the differentiation of behavior. Older people receive more respect than younger persons, and that is automatic and unrelated to their other attributes (e.g. occupation).

#### (XIV) Sex Differentiation

This is an obvious dimension of differentiation widely used across the world. It takes some localized forms in certain parts of the world, such as the male chauvinist belief system in Euro-American cultures which is contrasted with a unisex ideology. Another form of it is found in Hispanic cultures:

Machismo-Marianismo. Sex role differentiation is greater in the

Mediterranean. In both Greece and Latin America we find definite jobs that are part of the woman's activities which men will not do, even when that is very inconvenient. Conversely, there are many jobs that are done only by men. Both assimilators have several incidents of strong role differentiation, which is much greater than what is usually seen in the United States. For example, the Greek assimilator tells about the size of the tip a father is supposed to give to the hospital staff when a boy versus a girl is born; if a boy is born it has to be larger than if a girl is born. It also tells that many Greek wives are threatened by males who come into the kitchen "to help." The Latino emphasis on machismo, and the double standard of morality for men and women are well known. Marianismo is a pattern of female submission, self-sacrifice, and stoicism. Sex differentiation is also seen in the physical separation of the sexes. In Greek villages, just as much as in Latino settings, men are "in the street" or in the public places (cafés, etc.) while women are in their homes, unless they have urgent business (shopping, getting water from the well) outside the house.

How Do People Deal With Information?

1. Ideologism - Pragmatism

This dimension (proposed by Glenn, 1981) contrasts the ideologist who employs a broad ideology or framework within which all experience can be understood and the pragmatist who considers each experience as having limited generality. Glenn used the terms universalist-particularist, which are not used here because they were also used by Parsons meaning something different. The ideologist starts with a broad framework, such as a religious system, Marxism, or a socio-political ideology and "places" every "fact" into it, so that the fact "fits." The pragmatist starts

with facts and empirical observations and from them extracts a generalization. So, the first pattern is deductive and generalizing while the second is inductive and particularizing. There is also a tendency for the first pattern to be absolutistic and the second probabilistic. Cultural differences in probabilistic thinking, reported by Wright and Phillips (1980), probably reflect this dimension.

The first orientation is found in Southern and Eastern Europe (under the influence of rather centralized churches, or ideologies) as well as South America while the second is found mostly in Northern Europe and North America. It is likely that an ideological framework requires relatively homogeneous belief systems and considerable cultural stability (e.g. the Catholic Church in the middle ages), since extreme heterogeneity makes it difficult to fit all observations into a single framework, and if cultures are fast-changing it is difficult to explain all that happens within a simple framework. Thus, pluralistic (many belief patterns acceptable) and fast changing societies are likely to become pragmatic.

In interpersonal discussions the Ideologist insists on settling principles before discussing details. The Pragmatist, on the other hand, prefers to settle small issues and hopes to settle broader issues only if the narrow ones are settled. So, the Soviets, who are ideologists, typically push for a general principle (such as universal disarmament) while the Americans, who are pragmatists, strive for a limited agreement (e.g. limitation of a particular weapon).

Glenn notes that pragmatism is found in two forms: pre-industrial and post-industrial. Pre-industrial pragmatism is found in societies where survival is a major concern. Post-industrial pragmatism is perhaps a response to information overload where broad frameworks do not work.

Ideologist societies are likely to use more central planning;

pragmatic are likely to use several centers of power. When an ideologist meets a pragmatist (say, a Frenchman meeting an American) the first sees the second as interested in trivial details, too practical, and unable to have "great thoughts." Conversely, the second is likely to see the first as too theoretical, impractical, and fuzzy thinking.

There is no need to assign any evaluation to either pole of this dimension. From a cross-cultural perspective both tendencies are valuable. Ideologists can be good scientists (theorists); pragmatists can be good technologists.

The Hispanic emphasis on morality, Catholicism, relations with saints, spiritism, ideology, and the belittling of materialism fits into a broad framework. Social behavior is seen in non-utilitarian, spiritual terms; personal integrity is above material considerations. The North American is, by contrast, interested in "what works," and that is usually something material, or a utilitarian social relationship or institution.

The ideological emphasis on the "big picture" often results in classifications of experience that appear bizarre to the pragmatist. For example ideological Greek students at the University of Yannina, in Northern Greece accused a Greek professor of employing "imperialist-American statistical methods." The method in question was analysis of variance! Conversely, arguments produced by pragmatists appear "naive" to ideologists, because they "fail" to see the connections between specific events (such as analysis of variance) and the big picture (imperialism).

## 2. Associative-Abstractive

In some cultures communication is via associations. Everything that is associated with an event or idea can be considered in thinking and communicating about the idea. In other cultures communication requires abstraction of those elements that are relevant to a particular situation.

For example, if there is an automobile accident people in associative cultures may consider such matters as "what did the driver eat last week" or "how well did the driver sleep two days ago," as well as, of course, the most directly relevant matters, such as what did he drink before the accident and how did he sleep the night before. Communication in associative cultures can be highly indirect; its elements tend to be concrete.

The Los Angeles Times (February 12, 1977) published the actual wording of one exchange between the Egyptian ambassador to Paris (a Westernized Arab) and his foreign minister (a traditional Arab). The ambassador (A) wanted to know about the talks of the foreign minister (FM) with French officials. Here are some excerpts:

A: "What is the news?"

FM: "The machine is working as usual, working."

A: "I mean the news of the Paris visit."

FM: "The important thing is not the preface, but the book."

A: "Do you mean the preface to the visit?"

FM: "I mean the essence should be as clean as the appearance, or else everything is lost."

A: "Do you mean the essence of the visit and its appearance?"

FM: "I mean that we must not lose ourselves in formalities and let go of the basic things."

The interview goes on and toward the end it was as follows:

FM: "Paris butter is like Paris."

A: "Tasty?"

FM: "Transparent."

A: "Light?"

FM: "Rich."

A: "Wholesome?"

FM: "Necessary." "Now," added the FM, "treat what you have heard as a secret between the two of us."

Of course, Westerners extract no meaning from this conversation.

They are not sufficiently associative to do so. Nor do their associations "match." They tend to speak in more abstract, but more directly relevant terms.

Related to this concept is the idea of specificity-diffuseness.

Associative cultures are more diffuse--everything is related to everything else. Abstractive cultures tend to be specific. For example, the distinction between "my person" and "my ideas" is non-existent in the Arab countries, but is quite clear to North Americans (Foa and Chemers, 1967). In a diffuse culture one does not reciprocate exactly, and at once, but in another mode and at another time. So, when Nixon visited China and one of his Chinese hosts lifted some excellent food out of his dish and put it on Nixon's dish, Nixon (correctly) just nodded and smiled. But when former Secretary of Defense Brown was placed in the same situation he took (incorrectly) a piece of his food and gave it to the Chinese. Brown was highly specific!

Still another related dimension is field independence vs field dependence. The associative is field dependent; the abstractive field independent. An extensive literature, reviewed by Witkin and Berry (1975) shows that field dependent persons are more sensitive to interpersonal relationships (person oriented), while field independent persons are more capable in analyzing visual stimuli (object oriented); they also do better in the imbedded figures test, and are better mechanics. While there is some doubt that field dependence-independence refers to cognitive style, rather than ability (Widiger, Knudson, & Rorer, 1980), it is worth studying

Berry (1979) argues that certain ecologies make interdependence much more important for survival than other ecologies. In the former, people are socialized severely, children are highly controlled during socialization, and adults are field dependent--or field sensitive. Other ecologies allow people to survive with relatively little interdependence. In such ecologies self-reliance is rewarded, children are raised autonomously, and given freedoms to explore the environment. In such ecologies adults are very good at exploring the environment, but not as good in interpersonal relations. In general, preliterate societies that survive through agriculture are field sensitive, while preliterate societies that survive on solitary hunting or gathering are field independent.

Groups that engage in face-to-face negotiations, such as merchants, are more field sensitive. Sex differences, obtained in a variety of tests, suggest that men are more field-independent and women more dependent, but there are examples of reversals, such as in a sample of Orthodox Jews in New York City, where the men engage in abstract theological pursuits, and the women explore the environment (e.g. shop). Of course, in many societies women are restricted from exploring the environment, and men are allowed to explore it. Thus, these sex differences are apparently due to differential sex socialization. Also, some cultures protect their children more, controlling them and not allowing them to explore widely. Latin American groups often have higher field dependence scores (Burriel, 1975; Kagen & Zahn, 1975; Ramirez & Price-Williams, 1974; Kagan & Burriel, 1977). Perhaps this can be traced to parents who are more protective of children than mainstream American parents. Finally, socialization in a limited space, with limited opportunities to visualize in three dimensions (e.g. play with three dimensional toys) may also result in less field independence, thus accounting for the less field independent scores of blacks than whites (Shade, in press, provides a review).

Sensitivity to interpersonal relationships as a skill is found in societies where interdependence is extremely functional. Such societies place great value on gregariousness and personalism (face-to-face contact); social controls often operate through gossip and ridicule. In such cultures people spend a lot of time thinking about interpersonal relationships. Most Mediterranean cultures are characterized by such patterns. Juvenile delinquency is low in those cultures because the severe socialization and constant supervision and control of the youngsters makes it less likely. From the mainstream American perspective that type of socialization involves overprotection, too much "dependency" and not enough independence, but the results in terms of delinquency are striking (e.g. holding size of city population constant, Athens, Greece, has one of the lowest rates of delinquency in the world).

The associative pattern is likely to improve the chances of a culture's achievements in music, poetry, and art; the abstractive is likely to improve a culture's chances of achievement in science and technology. Crossing the ideological-pragmatic with the associative-abstractive dimensions results in four patterns:

pragmatic-abstractive, such as the United States outstanding in technology, commerce

ideological-abstractive, such as in parts of Germany, outstanding in science

pragmatic-associative, such as in parts of the Arab culture, outstanding in poetry

ideological-associative, such as in Latin America, outstanding in literature, the arts

One strong qualification is in order: the fact that a culture uses predominantly one pattern of thought does not mean that there are not many

of its members who use other patterns. We do not yet understand the difference between a great poet and a great scientist. Some of the differences may be due to genetic factors. Such genetic variations will occur in all populations. In associative environments when a poet is born, the chances that the poet will develop to an optimal point are greater; the same genetic structure in an abstractive society may result in less spectacular achievement. Conversely, a great scientist born in an associative culture may find it difficult to achieve and may immigrate or simply not be as great. The non-random distribution of achievement in various fields shows that the Zeitgeist is a critical variable, and this element is in part a conjunction of simultaneous achievement by several individuals, under the influence of an exceptionally favorable similar thought pattern.

One should expect associative cultures to depend on oral, face-to-face communications, and many people in such cultures, even if they are highly literate, may prefer them to written communications. Albert's assimilator has one incident in which a teacher of a science lesson found that Spanish speaking students had difficulties with written instructions concerning how to operate an instrument. Latino students thought that the explanation of this confusion was that the instructions were written. Albert's feedback states that in Latin American cultures preference is given to demonstrations of how the equipment works and to oral explanations, to a much greater degree than in North America. Furthermore, consistent with the differences in field dependence between North and South America, she mentions the inclination of North Americans to handle mechanical objects and the inclination of South Americans to emphasize interpersonal relationships and artistic products. She notes that South Americans have won many Nobel prizes for literature and few in science. One might add

that the proportion of Nobel prizes in literature relative to science is rather small in North America.

In another episode in Albert's assimilator, a North American teacher refuses to talk to her Spanish-speaking pupil about the fighting that goes on in her pupil's home. Of course, North Americans see this as refusal to get involved in a pupil's personal problems which they think is just fine, but Latinos find the teacher lacking in "understanding." Albert's feedback tells that Latin Americans expect a more personalized relationship with the teacher; teachers are not there just to teach but also to act as surrogate parents. Another of Albert's episodes involves a Spanish child that is given a book and told to read it. How does the child feel? Latino students think that the child will feel bad and consider the teacher's behavior inappropriate; it shows that the teacher is not paying enough attention to her pupil. Albert mentions the more communal character of Latin American cultures, where people are used to doing a lot of things together, relative to North American culture where individual action is often required. This is a point also made by many Peace Corps volunteers in conversations with Triandis: their hosts do not leave them alone! In South America privacy is not a virtue; it is strongly associated with loneliness and rejection. People do not obtain privacy in a physical sense, though they undoubtedly have private thoughts and daydreams while in the presence of others.

A related episode, in Albert's assimilator, involves some Latino mothers, who stay and chat in the school building, after bringing their children to class. The principal is annoyed. Why is he bothered? Presumably he is not used to having people around as much, while for the mothers this is quite natural. Albert comments that North Americans are used to a certain amount of privacy and quiet, while Latin Americans are almost

constantly surrounded by people and do not find this bothersome. In fact, they rather like it and do not understand why North Americans wish to be away from people some of the time. In Latin America, to be left alone is almost a punishment.

A similar cultural pattern occurs in Greece, where people "drop in" without letting you know, or telephoning. Americans who have made dates with Greek girls often find, upon arrival at her place, that several other friends, of both sexes, are there, having just dropped in. The proper behavior is to have everybody go out as a group. The bigger the group the better. The value placed on large groups may actually be related to mechanisms of privacy for a couple, since when the group is very large the couple can disappear without being noticed. At the same time, the group provides a chaperon function which is valued in itself.

In the feedback to another assimilator item Albert also makes the point that task-related praise is quite effective for North Americans, but South Americans respond more positively to personalized interest and attention. In still another episode, Spanish speaking pupils treat the teacher as a member of their family and want to find out a lot about her personal life. In the feedback to another incident she mentions that Latino students expect a much more personalized attention by teachers. In still another episode a Latino student dislikes working alone on assignments. Several episodes make the point that shame is an important mechanism of social control in Latin America. Of course, shame is much more effective when a child is strongly interdependent with others. An isolated child is less likely to be controlled by this mechanism. Another mechanism that is widely used in highly interdependent societies is ridicule. Several of Albert's episodes make the point that Latin students are particularly sensitive and worried about ridicule.

Comments on Patterns of Thought

Incidentally, the above mentioned conceptual patterns correspond, to some extent, to the "patterns of thought" identified in the classic study by Pribram (1949). His research was based only on European cultures, and focused on the question: "What is logical?" He examined the arguments of leading philosophers and other scholars and identified four patterns of thought, which he called universalistic, nominalistic, intuitional, and dialectic.

The universalistic of Pribram is the same as the ideological. He argued that an all powerful church, or a theocratic state proposing unchanging, universal concepts, such as a hierarchical system of moral values emanating from God, are antecedents of such thinking. Both the Catholic and the Orthodox Christian states (past like Russia; or present) use this pattern of thought.

The nominalistic is very similar to the pragmatic pattern mentioned above. Pribram mentions William of Ockham as rejecting the idea that general concepts exist in reality; all concepts are creations of the human mind, arrived by grouping impressions according to common attributes. Knowledge is acquired by experience, not contemplation.

Pribram states that the Anglo-Saxons are nominalists (pragmatists) and the Latins are universalists (ideologists). Germany was the battle-ground between the thought patterns to the North and South of it, and the struggle resulted in two additional patterns: the intuitional and the dialectic.

The intuitional argued that one can know the whole without knowing the parts. It does seem to have some similarities to associative thinking, since a whole that is associated with a stimulus can dominate thinking. The dialectical focuses on transformations of quantity into quality, and

the strife and unity of opposites.

It is probable that the latter two patterns of thought are not widely used by large cultural groups.

The relationship of minority to majority cultures is also relevant and can be analyzed as a dimension of the relationship among cultures. In situations of acculturation people have incorporated most of the beliefs, values and behavioral patterns of the majority culture; in situations of isolation one finds very distinct cultural patterns in the minority culture that do not reflect the patterns of the majority; in situations of confrontation one finds groups who are attacking the majority culture trying to get it to change and accept the minority culture; in situations of anomie one finds that neither the norms of the minority nor the majority are important.

### 3. 4. & 5. Self-Concept and Identification with Different Groups

All beliefs concerning oneself are aspects of the self-concept. Such beliefs emerge through interaction with others (Meade's looking glass self). Thinking of oneself as extremely (3) good (high self-esteem), (4) powerful and (5) active is found in some cultures but not in others. Osgood, May and Miron (1975) present the means and standard deviations of judgments on the concept I (myself) from 23 cultures (see p. 435). For evaluation (good) the mean is 1.3; for potency (strong) the mean is .7; for activity (active) the mean is 1.0. The most positive evaluations of oneself were found in Iran and Afghanistan (means of 2.2 and 2.0); the least positive in Mexico (.6) and New Delhi (India) (.7); for Potency the top was in Lebanon, Yugoslavia and Hong Kong; the minimum was in Mysore (India), Finland, and Thailand. For Activity the top was in Iran and the bottom in Lebanon and New Delhi (India).

Another dimension of the self-concept is the person's identification

with other people (selection of reference groups): one's race, social class, religion, tribe, language, age, sex, ethnic group can be selected and emphasized. There are probably no gross cultural differences on this tendency, but it is an important individual differences variable and it is likely that in some cultures there will be more persons identifying with one or another of the above. For example, in Greece, and many Muslim countries, religion is an important element in the self-definition of many people.

Values

Preferences for certain thoughts or actions or events or states of nature are called values. Extensive discussions of values by Kluckhohn (1956, 1959) and Kluckhohn and Strodtbeck (1961) resulted in the suggestion that there are five basic value orientations concerned with (a) beliefs about innate human nature, (b) preferences for subjugation to nature, or harmony, or mastery over nature, (c) focus on past, present or future time, (d) emphasis on doing, versus being, versus being-in-becoming, and (e) emphasis on individualism vs collectivism. We will here mention some of these orientations, and illustrate them with empirical investigations, whenever possible, and add some that have emerged from empirical work and yet do not fit neatly into the Kluckhohn framework. Specifically, Uncertainty Avoidance and Masculinity have emerged as important values in the work of Hofstede (1980) and they do not fit well in the framework.

6. Human Nature Good, Bad or Neither

Levels of interpersonal trust have been identified empirically to be associated with particular groups (Triandis, 1976). Specifically, blacks with a long history of unemployment, in contrast with employed blacks and whites, had a point of view called "eco-system distrust." They did not trust other people, or even the lawfulness of their environment. Events,

to them, seemed random occurrences rather than controllable by human actions.

Such a point of view may reflect a broader orientation in which people are seen as basically bad and must be avoided or attacked. Such a theme is by no means limited to unemployed blacks. Many anthropological reports have identified groups with a "paranoid" view of relationships with others. In some sense many ideas about "socialization" and "development," such as Freud's, reflect the notion that somehow society must shape people into "becoming good."

#### 7. Human Nature is Changeable

Another dimension involves the idea that people may be changed. In some societies they are viewed as quite unchangeable, while in other societies they are viewed as highly changeable. The latter societies are likely to invest vast sums in education, since that is a way to change (perfect) humans. The United States is an example of this kind of society. Those who hold that humans are unchangeable see little point in investing in education.

#### 8. Mastery-Harmony-Subjugation to Nature

The mastery over nature orientation is characterized by preference for solutions that control nature, or change the environment. The construction of dams, the changing of the course of rivers, the indifference to pollution may be seen as aspects of this orientation, which is found mostly in Euroamerica. The American Indians have a more balanced orientation where harmony with nature is emphasized. This view has penetrated many Latin cultures so that co-existence with nature is important; balance and harmony in life and no excesses are valued. Illness is due to some sort of imbalance.

Subjugation to nature is a more passive orientation. The contrast

between subjugation and mastery parallels the contrast between external and internal control (Rotter, 1966). The externally controlled person feels that most events are caused by influences that are external to him or her, and hence essentially uncontrolled. Humans should submit to the will of the Gods. By contrast, internally controlled persons see most events that affect them as caused by themselves.

#### 9. Past-Present-Future Orientation

Time is seen as important in some cultures (e.g. most industrialized cultures) and less important in other cultures (e.g. those around the Mediterranean). Latin Americans take the position that people should not be slaves to time; interpersonal relations should take priority; they de-emphasize hurrying, rushing and efficiency. They also prefer sure, short-term benefits to uncertain large, future benefits.

One correlate of industrialization is concern with time. The following item is useful for diagnosing such concern: "Suppose you agreed with one of your friends that he should come to your house at noon. How long will you wait before deciding that your friend will not come?" Some people answer "15 minutes;" others "half-an-hour," still others answer "a day."

Albert makes the point, in the feedback to one of her items, that Latin Americans consider interpersonal relationships so much more important than schedules that if they meet a friend on the way to an appointment they are likely to be late for the appointment. A similar perspective is found in Greece, though there are some differences depending on the location of the interaction: in Athens time is more important than in villages. The Greek assimilator points out that "Greek time" is about one hour and a half after the start of a social event. Also, in Greece, estimates of the time required to complete a task typically are inaccurate.

10. Doing-Being-Being in Becoming

Western cultures value action. North Americans, for instance, consider "the man of action" as a very positive stimulus. Other cultures view being--having a deep experience of life--and being-in-becoming--evolving as a person to "higher" levels of understanding--as much more valuable. Latin Americans de-emphasize doing. One's work should not be the center of one's life and it should not take all of one's time. People should have fun, should experience deeply, should reach higher levels of understanding. Diaz-Guerrero (1979) talks about coping styles, with the North American being more "active" and the Mexican more "passive." In addition to culture, age, sex, and socio-economic level also influence coping style. When asked to estimate 1 minute, Mexican samples averaged 1.5 and North American samples averaged .8 of a minute. Reaction time differences, with the active style persons having shorter reaction times ( $r = -.30$ ), and higher scores on scales of aggression, autonomy, dominance, and achievement provide a picture of the active person as high in the doing orientation.

11. Power Distance

Hofstede (1980) refers to this dimension as reflecting the perception of differences in quality between those who have power--the rich, the leaders, the boss--and those who do not--the poor, the subordinates. In high Power Distance cultures people report that subordinates do not dare to argue with their supervisors. Hofstede found the most Power Distance in the Philippines and in Latin America. Italy and the United States are examples of middle range Power Distance. Least Power Distance was found in Austria and the Scandinavian countries.

In high Power Distance countries rank has its privileges and that is widely accepted. Low Power Distance countries tend to have small,

ethnically homogeneous populations that are relatively rich, with a social security system that allows few people to be very rich or very poor.

In Austria, low Power Distance does not imply that people do not pay attention to status. Rather, what has been achieved is that everybody has been given status. Everyone has a "title" (Mr. Merchant, Mr. Plumber), so there is little distance.

In languages that have both the Vous and Tu (Sie/Du; Usted/Tu) forms, when there is high Power Distance, people use non-reciprocal V-T. That is, the low status person uses V and the high status person uses T. In countries with low Power Distance they use reciprocal V or T, depending on the degree of intimacy. In high Power Distance countries one notes that the language itself reflects distance. For example, in Peru, there is no distinction between "to lead" and "to command" (Whyte and Braun, 1966). Both are conveyed by mandar. Also, there is no distinction between "to follow" and "to obey"--obedecer. Thus there is no distinction between voluntary and coercive power relationships. Furthermore, one cannot say "the management respects the union," because respecto can only be used to describe a subordinate relating to a superordinate. In addition, there is a clear difference between obrero (one who works with his hands) and empleado (one who works with documents) though the latter term is more general and may apply to one's servants. By contrast in the United States we talk about blue and white-collar workers, as if changing one's clothes results in a change of social class! The Peruvians have separate social security systems for these two classes of workers, and entirely segregated wings in hospitals. Thus, in Peru class differences function like caste differences. By contrast, in the United States class lines are more fluid and easier to penetrate.

Where does Power Distance come from? Hofstede finds correlations

with distance from the equator ( $r = -.47$ ), income per capita ( $= -.67$ ), size of the country ( $= -.35$ ). In short, small Power Distance is associated with Northern, rich and small countries. I suspect that educational homogeneity is the most powerful determinant.

In Latin America a correlate of large Power Distance is the high sensitivity to criticism, the importance of respect, dignity and "saving face," allowing others to maintain pride, the respect for authority, the sensitivity to slights and insults, the love of ceremonials and rituals, the idea that envy is very bad, and the great respect for powerful, charismatic leaders (liderismo). People are expected to know how to behave with dignity, how much respect they should claim from others, as well as how much respect they owe to others. Among the upper class we also find the rejection of manual labor, the importance of etiquette, the use of "high culture" (opera, ballet) as a means of becoming distinguishable from the hoi polloi, the importance of appearance, clothes (they say, "you are treated the way you look").

The higher Power Distance found in Greece and Latin America than in the U.S. is illustrated in a number of assimilator items. Thus in Greece, episodes describe how a high status person loses status by taking off his jacket and rolling up his sleeves; teachers are expected to be rather distant from their pupils; employees expect close supervision; formality is expected of one's supervisors. Albert's assimilator has items concerning the anxiety of children when the powerful people in their life (their parents and teachers) meet; Hispanic children are brought up not to be assertive (in fact Spanish does not have an exact equivalent to this word), they are socialized to be interpersonally sensitive; dress and looks are very important; Hispanics get insulted by a larger set of events than mainstream Americans; the superordinate-subordinate relationship is more

"pronounced," relations between teachers and pupils tend to be more formal, obedience to rules is somewhat greater, Hispanics obey somewhat more those in positions of authority than do mainstream Americans.

#### 12. Uncertainty Avoidance vs Tolerance for Ambiguity

In many cultures people feel a great need for security, certainty, rules and control by others; in other cultures such needs are weak. In Hofstede's study the largest scores on Uncertainty Avoidance were obtained in Greece, Japan, and most Catholic countries, particularly Latin America. Low scores were found in Hong Kong, Singapore and Scandinavia.

Speculations about the origin of Uncertainty Avoidance would include the idea that countries with a turbulent history--uncertainty, revolutions, instability--might move toward a more "tight" pattern that reduces anxiety. Hofstede reports correlations between Lynn's national anxiety level and Uncertainty Avoidance.

In Hofstede's data Uncertainty Avoidance is related negatively to Gross National Product ( $r = -.30$ ), and among the poorer countries positively to latitude while among the richer countries it is negatively related to latitude ( $r = +.51$  and  $-.44$  respectively). For the richer countries, the strongest correlation of Uncertainty Avoidance was with the 1960-1970 Economic Growth ( $r = .57$ ) data.

Hofstede (personal communication) suspects that Uncertainty Avoidance is empirically related to Glenn's Ideologism.

In Greece and in Latino cultures the closeness of parents to children may be related to Uncertainty Avoidance. Parents are too anxious to let their children be unsupervised. Thus, mothers are likely to take their primary school age children to school, rather than let them walk to it. The close relationship of parents and children is considered good. Several of the items in Albert's assimilator reflect this value. For example,

Spanish speaking children are often absent from school when the weather is bad. The idea that they might catch cold leads to parental over-protection in such cases. Several items from the Greek assimilator make the same point. The closeness of mothers and children is particularly noticeable, with the mothers "studying together" with their high school age children, so as to supervise them, and help them learn more.

### 13. Individualism-Collectivism

The Kluckhohn & Strodtbeck (1961) framework distinguishes two kinds of collectivist orientations: paying attention to the opinions of elders or superordinates (the lineal orientation) and paying attention to the opinions of peers (collateral orientation). For our purposes this is a detail. Hofstede (personal communication) goes further and places the lineal orientation in a separate dimension, under Power Distance. The major interest is on the contrast between the individualist and collectivist orientations.

Hofstede (1980) argues that this dimension reflects the way people live together in nuclear families, extended families, or tribes. The more individualist the country the less acquiescence response set is found in questionnaires; the higher the Gross National Product ( $r = .82$ ), the more occupational mobility and the greater the freedom of the press. It is likely that the idea of a self-concept separate from others is a Western idea. In collectivist cultures the self-concept is an expression of collectivities. While North Americans consider Individualism a value, the Maoist Chinese see it as an evil and a manifestation of selfishness. In Hofstede's index the U.S.A. and the English speaking countries (Australia, Canada) are very high on Individualism; low scores were recorded in Latin American and the Balkan countries. In general, most less-developed countries are low.

Individualism reflects a preference for independence from groups. Collectivism reflects preference for inter-dependence. Hofstede points out that individualism is associated with high evaluation for personal time, freedom and challenge; hedonism (pleasure, security, affection) is linked to individualism while collectivism is associated with the use of skills, expertness, prestige, and duty. In Hofstede's data colder countries tend to be more individualistic. In such climates survival may require individual initiatives.

Hofstede (personal communication) sees a link between this dimension and "guilt" vs "shame" cultures. It may also be correlated with the abstractive-associative dimension described earlier.

Triandis (1972) reports a study of the perceived antecedents and consequents of certain concepts. The concept PROGRESS appears to have a different meaning in a highly individualistic country, such as the U.S., than in collectivistic countries like Greece and India. Specifically, in the U.S. the antecedents of PROGRESS are *ambition, drive, foresight, improvement, and initiative*, while in Greece these ideas do not appear to be antecedents of PROGRESS. Conversely, in Greece the antecedents are *honesty, interested learning, peace, and seriousness*. The consequents in the U.S. are *achievement, development, expansion, and success*. In Greece, they are *civilization, good name, happiness, and well-being*. Judgmentally, the U.S. answers seem to be more closely related to the progress of an individual than to the progress of a collectivity; conversely, the Greek answers appear more closely related to the progress of a collectivity than an individual. Note particularly the links between *peace and progress, and progress and civilization* in Greece, which do not appear in the U.S. The corresponding Indian data may be even more clear. One of the antecedents of PROGRESS seen in India is *unity*, which can not be an individual

concept; the consequences of PROGRESS include *glory, power, and wealth*, all of which can be used for the characterization of a collectivity.

In other words, even at the level of the meaning that words have in different cultures we can note differential emphasis on the individualism-collectivism dimension across cultures.

#### 14. Masculinity-Femininity

Hofstede extracted a dimension he called masculinity. In cultures high in masculinity emphasis is placed on personal advancement and earnings; in cultures high in femininity emphasis is placed on rendering service, and on having a nice physical environment. The top masculinity index was found in Japan, with Austria, Venezuela, Italy and Switzerland also high. The lowest scores were found in Sweden, Norway, Netherlands, Denmark and Yugoslavia in that order. Hofstede argues that in highly masculine countries people define achievement in terms of recognition and wealth, rather than life style. Japan is a good example. Work is a central value, people like to work long hours and they are attracted to larger organizations; there are great differences between men and women. In short, it appears that there is more differentiation by sex in high masculine countries. The Latin emphasis on machismo and marianismo, and the double standard of morality for the two sexes are examples of greater differentiation on the basis of sex.

#### A Comment

Some of the dimensions described above are probably correlated. Specifically, collectivism, familism, power distance, and associative use of information appear to occur in the same cultures.

The two assimilators mentioned earlier are very rich in examples of familism, collectivism and power distance. In the Greek assimilator emphasis is placed on the idea that a person's behavior reflects on the

worth and quality of his family; many items mention that Greeks will go out of their way to help friends, the "philotimo" is a principle of behavior and it means to behave according to the expectations of the ingroup, and if one follows the philotimo principle one receives honor and if one does not one feels like a cheat; people are expected to break rules and government regulations when this is demanded by their ingroup, trust is given only to ingroup members, information is denied outgroup members, successful firms are family operated and large firms generally are not successful, managers are ingroup members, and competence is less important than being an ingroup member; finally some items show that ingroup boundaries are situationally determined and flexible. Albert mentions that Latino children are not likely to stay overnight at the house of a fellow student, but are likely to stay at the house of a relative.

Obviously, what is needed is the development of standardized scales to measure the location of individuals on those four dimensions and the correlation of the scores to establish if across a wide sample of cultures these four dimensions are correlated. Such studies can be done also ecologically, i.e. correlated means of individuals across a sample of cultures.

#### What do People Do?

I have reviewed in Triandis (1977) evidence suggesting that there are four universal dimensions of social behavior. The next four dimensions are these and correspond to dimensions that have already been mentioned and therefore are given numbers that have already been used.

#### (vi) Association-Dissociation

Associative behaviors are generally supportive, helpful, cooperative; dissociative behaviors include avoidance or attack behaviors. There seems

to exist a conceptual correspondence between that dimension and dimension 6, human nature is good vs bad. In Triandis (1980) I developed a number of hypotheses concerning the links between ecology and this dimension. Limitations of space preclude restatement of these hypotheses here.

(xi) Superordination-Subordination

This dimension clearly corresponds to Power Distance. Superordinate behaviors (e.g. give orders to, criticize) contrast with subordination behaviors (e.g. obey). Again, refer to Triandis (1980) for hypotheses linking ecology and this dimension.

(xiii) Intimacy-Formality

This dimension corresponds to dimension 13, mentioned above. Intimacy is found in collectivist societies where ingroup members know a good deal about a person. Individualist societies, by contrast, adopt a more formal, distant relationship. Such a behavioral pattern must not be confused with informality. Americans use first names providing an illusion of intimacy, but in fact have a rather formal culture, where individuals reveal very little about themselves and act according to rules that allow considerable emotional control. Corresponding to this dimension is probably the dimension used by many anthropologists (e.g. Ruth Benedict) and Glenn (1981) under the label Apollonian (formal, control) vs Dionysian (informal, emotional expressiveness allowed). Also, the dimension of contact is conceptually related.

Contact. In some cultures physical contact between persons is much greater than in others. In contact cultures people touch a lot, they stand much closer to each other, they orient their bodies so that they face each other, they look each other in the eye, and they employ greater amplitudes of emotional expression. In no-contact cultures there is little touching, looking into the eyes, and so on.

Mediterranean cultures tend to touch. This can be seen both in the stories of Albert's assimilator and the Greek assimilator. Several empirical investigations also support this point (Little, 1965; Argyle, 1979; Watson, 1970) as do observational studies (Hall, 1959, 1966).

Emotional control appears to parallel the dimension of contact. Specifically, contact cultures tend to be also Dionysian--express emotion openly, with little inhibition. On joyful occasions people will shout and sing, dance and laugh loudly, even during the early hours of the morning; on sad occasions they will cry openly, without inhibition. By contrast, low-contact cultures appear to control emotional expression; Glenn calls them Apollonian.

In interpersonal contact an Apollonian is likely to see a Dionysian as "warm, charming, inefficient, and time-wasting," while the Dionysian is likely to see the Apollonian as "efficient, cold, and overconcerned with time."

The origin of the pattern is unclear, but a study by Robbins, DeWalt and Pelto (1972) is suggestive. They found more aggression in warm (average temperature more than 50°F) than in cold climates, and more socialization anxiety in cold than in warm climates. Warm climates, they show, have more permissive sex codes, more emotional expressiveness than cold climates. Cold climates have higher suicide rates, while warm climates have higher homicide rates. One speculation is that humans, before starting to wander out of Africa, around 100,000 years ago, were adjusted to warm climates and free in their expression of emotion, touching, and so on. As they moved away from the warm climates they had to become more disciplined. Control over the environment required and demanded control over oneself. Such control resulted in inhibition of emotion, contact and other "natural" tendencies. Also, as cultures had

a longer unbroken history of civilized life (say, Indian, China) they also learned to control emotions, or possibly, because they learned to control emotions they managed to maintain an unbroken history of civilized life.

(x) Overt vs Covert

The fourth universal dimension is overt (visible muscle movements) vs covert (a rich fantasy life) behaviors. It is probable that this dimension overlaps with the tight vs loose dimension. In societies where the norms are very clear people have trouble behaving according to these high standards and may engage in a fantasy life. Thus, in tight societies one might find more effort expended in humor, art, music, etc. while in loose societies one may actually observe more overt behaviors. However, since it is speculative that the overt-covert corresponds to the tight-loose dimension it seems desirable to give the latter dimension a separate number.

(xii) Tight vs Loose

In tight societies norms are clear and people are given little latitude for deviation from these norms. In industrialized societies this behavior is desirable, especially in manufacturing where precision to conform to engineering specifications leads to high quality. Similar precision can be seen in the way people use time. For example, an appointment may allow deviation from the appointed time of a few minutes in some societies and several hours in others.

Pelto (1969) discussed tight and loose societies and gave several examples. The dimension corresponds to Hofstede's Uncertainty Avoidance. Greece and Japan are high on the latter dimension, though Greeks are not particularly precise, or particularly time-conscious. Precision, in Greece, refers only to doing what is expected by the ingroup (the principle of philotimo), so it is rather limited to those behaviors that have direct

relevance to the ingroup. Outside the ingroup behavior is quite loose. This suggests that cultures may be tight on some behaviors and loose in others. Hofstede mentions that Uncertainty Avoidance is associated with anxiety. Knowing what to do, when and where can reduce this anxiety. The concept of "tolerance for ambiguity" is the opposite of Uncertainty Avoidance.

Superdimensions: Complexity and Modernity

Many of the dimensions mentioned above are not entirely uncorrelated. Of course, research is needed to determine empirically how they are related. They may form clusters of dimensions (superdimensions) such as complexity and modernity. These dimensions may be like second order factors in factor analysis, i.e. they may summarize the correlations across the dimensions mentioned so far. Table 2 suggests these relationships.

Cultural Complexity is an important variable in the work of Carneiro (1970), Lomax and Berkowitz (1972) and Murdock and Provost (1973). Complex societies have writing and records; people live in one place rather than being nomadic; agriculture is important, as opposed to hunting and gathering; settlements are large; there is technical specialization; there are means of transportation other than walking; there is money; population is relatively dense; there is political organization with several levels of authority and social stratification. The Romans, Chinese and Aztecs were complex societies, while the contemporary Pygmies are relatively simple.

Complexity may relate to family structure in an inverted U relationship: at very low and very high levels of complexity we find nuclear families; at moderately high levels we find extended families (Blumberg & Winch, 1972). Such relationships may also be found in the case of the

dimensions mentioned earlier. For example, it may be that very simple societies are pragmatic (Glenn talks about "pre-industrial particularism"), many moderately complex societies are ideologic and extremely complex societies are again pragmatic (post-industrial particularism). It is likely that simple societies are associative, complex abstractive, and the very "sophisticated" persons within the complex adopt forms of associative communication (e.g. poetry). Complex societies are likely to be interested in both the past and the future, and to use different kinds of value orientations situationally (e.g. mastery over nature for the control of room temperature, but co-existence in the case of pollution of the environment, and subjugation to nature in the case of hurricanes). In very simple societies there is little role differentiation, but as soon as there is any complexity role differentiation takes place. But in post-industrial societies we find again little differentiation in some domains (e.g. sex role differentiation, with the unisex shop a symbol of that phenomenon.) So, an inverted U may operate in this case also. Complex societies tend to be able to handle more information, and hence use broader perspectives for social organization (e.g. the nation rather than the family) but they also emphasize very narrow groups (e.g. professional groups such as 20 people from all over the world who are working on the same research frontier in physics), hence another inverted U relationship may emerge.

Complexity also means more differentiation in every direction, e.g. more precise work standards, time standards, and work schedules, which would link with the Tight cultures attribute.

#### Modernity

Inkeles and Smith (1974) have presented evidence that within every society people differ in modernity. In general, persons who are more

educated, have many experiences with urban life, and work in factories are more modern. Such people are likely to use a doing, future-oriented set of values, a mastery over nature orientation, large, open-boundary ingroups, less differentiation by race, sex, tribe, religion, age, and more differentiation of the basis of achievement. Modernity is related to low familism, individualism and openness to new experiences.

Modernity is related to a disposition to form and hold opinions over a large number of topics, future orientation, emphasis on time, orientation toward planning, confidence that the world is calculable, awareness of the dignity of others and more disposition to respect others who happen to be different, and to believe in distributive justice.

Super-Superdimension: Complex Modernity

The latter two dimensions are somewhat related, since the very simple societies such as the Pygmies are among the least modern. Thus, there is some tendency for all the dimensions mentioned above to co-vary.

Page 45 suggests the probable pattern of relationships. Of course, much research is needed to discover the extent to which this pattern of relationships conforms to reality. At this point these relationships are somewhere between the realm of speculation and hypothesis. However, we already have the means to test the framework. Specifically, modernity is found to have a considerable range in most societies, and Inkeles and Smith (1974) have provided procedures for its measurement. Most of the dimensions mentioned above can be measured through appropriate questionnaires. Thus, one can determine if the relationships listed under modernity are present by studies, done in one culture at the level of individuals. However, the relationships listed under complexity require ecological studies and may use the Human Relations Area Files. There are already societies that have been identified by Murdock and Provost (1973)

as being at different levels of complexity. It remains to obtain measurements at the level of individuals, or cultures, or find suitable substitutes in the Human Relations Area Files, to test the relationships indicated in Table 2. Hofstede (personal communication) points out that many of his dimensions (Nos. 12 and 14 above) do not correlate with Modernity in his samples. However, it is not clear that his samples had sufficient range in Modernity. More research is needed here.

The above discussion should not be read as suggesting support for the so called convergence hypothesis--that as cultures become more modern they become more similar. In a schema which is as complex as that of Tables 1 and 2 there is no need to reach such a conclusion.

#### Concluding Comments

Limitations of space preclude a full discussion of links among the dimensions of this framework. Specific links between elements of subjective culture (Triandis, 1972) such as norms, roles, values and behavior have been described in other publications (Triandis, 1977, 1980). To understand the present section it will be necessary to be familiar with one of the latter publications. The essential elements of the argument linking the present dimensions would include the following points:

1. Cues emitted by the other person (dress, tone of voice, race, tribe, behavior, beliefs, sex, age, language, family membership, religion, nationality, etc.) may be linked to specific habits of behavior (e.g. avoidance). Such behavior occurs without "thinking."
2. The same cues are selectively perceived. Cultures that are sensitive to a particular dimension will include many individuals who will perceive that dimension. For instance, social class is more likely to be

perceived in a high power distance culture than in a low power distance culture.

3. The perceived cues, and other information about the setting, the issues, or the situation are processed according to patterns specified by ideologism and associativeness. Inferences are made about attributes of the other which result in attributions about the other. Such attributions determine the norms, roles and elements of the self-concept that will become salient. The latter three elements result in particular judgments about what the person "should do." This is the S-component of the Triandis (1980) framework.

4. The selectivity mentioned under 2 above is also influenced by the values of the individual. For example, an individualist will perceive those elements in the situation that are most relevant to his own goals, while a collectivist may perceive the elements most relevant to his ingroup's goals.

5. Social behavior is under the influence of habits (reflected in the dimensions listed under What do people do? in Table 1) and behavioral intentions (see Triandis, 1980).

6. Behavioral intentions are influenced by the S-component (see above), the affect toward the behavior (classical conditioning of emotions associated with the particular behavior) and the perceived consequences of the behavior (see Triandis, 1977 or 1980).

The dimensions of this framework have a probabilistic, sometimes contradictory and never determinist influence on social behavior. But for a large sample of people, across a sample of situations, one should obtain information from these dimensions that will improve the prediction of social behavior.

Albert, R. Communicating across cultures: A guide to Hispanic culture for North Americans. Champaign-Urbana, Ill.: University of Illinois School of Education, 1978.

Argyle, M. New developments in the analysis of social skills. In A. Wolfgang (Ed.) Nonverbal behavior. New York: Academic Press, 1979.

Berry, J. W. A cultural ecology of social behavior. In L. Berkowitz (Ed.) Advances in experimental social psychology. New York: Academic Press, 1979.

Blumberg, L., & Winch, R. F. Societal complexity and familial complexity: Evidence for the curvilinear hypothesis. American Journal of Sociology, 1972, 77, 896-920.

Buriel, R. Cognitive styles among three generations of Mexican American children. Journal of Cross-Cultural Psychology, 1975, 6, 417-429.

Carneiro, R. L. Scale analysis, evolutionary sequence, and the rating of cultures. In R. Naroll & R. Cohen (Eds.) A handbook of method in cultural anthropology. New York: Columbia University Press, 1970, 834-871

Diaz-Guerrero, R. The development of coping style. Human Development, 1979, 22, 320-331.

Foa, U., & Chemers, M. The significance of role behavior differentiation for cross-cultural interaction training. International Journal of Psychology, 1967, 2, 45-48.

Foster, G. M. The dyadic contract: A model for the social structure of a Mexican peasant village. In J. M. Potter, M. N. Diaz, & G. M. Foster (Eds.) Peasant society. Boston: Little, Brown & Co., 1967, 213-229.

Glenn, E. Man and mankind: Conflicts and communication between cultures. Ablex Publ. Co., 1981.

Greenberg, J. H. Universals of language. Cambridge: M.I.T. Press, 1963.

Hall, E. The silent language. Greenwich, Conn.: Fawcett, 1959.

Hall, E. The hidden dimension. New York: Doubleday, 1966.

Hofstede, G. Culture's consequences: International differences in work-related values. Beverly Hills, Cal.: Sage Publ., 1980.

Hsu, F. L. Kinship and culture. Chicago: Aldine, 1971.

Inkeles, A., & Smith, D. H. Becoming modern. Cambridge: Harvard Press, 1974.

Kagan, S., & Buriel, R. Field dependence-independence in Mexican American culture and education. In J. Martinez (Ed.) Chicano psychology. New York: Academic Press, 1977, 249-327.

Kagan, S., & Zahn, L. Field dependence and school achievement gap between Anglo American and Mexican American children. Journal of Educational Psychology, 1975, 67, 643-650.

Kluckhohn, C. Toward a comparison of value emphasis in different cultures. In L. D. White (Ed.) The state of the social sciences. Chicago: Univ. of Chicago Press, 1956, 116-132.

Kluckhohn, C. The scientific study of values. In University of Toronto Installation Lectures. Toronto: Univ. of Toronto Press, 1959.

Kluckhohn, F., & Strodtbeck, F. Variations in value orientations. New York: Harper & Row, 1961.

Little, K. B. Personal space. Journal of Experimental Social Psychology, 1965, 1, 237-247.

Lomax, A., & Berkowitz, N. The evolutionary taxonomy of culture. Science, 1972, 177, 228-239.

Mitchell, T., Gagerman, J., & Schwartz, S. Greek culture assimilator. Champaign-Urbana, Ill.: Univ. of Ill. Dept. of Psychology, 1969.

Murdock, G., & Provost, C. Measurement of cultural complexity. Ethnology, 1973, 12, 379, 392.

Osgood, C. E., May, W., & Minron, M. Cross-cultural universals of affective meaning. Urbana, Ill.: Univ. of Illinois Press, 1975.

Pelto, P. J. The differences between tight and loose societies. Trans-action, April, 1968, 37-40.

Pribram, K. Conflicting patterns of thought. Washington, D.C.: Public Affairs Press, 1949.

Ramirez, M., & Price-Williams, D. R. Cognitive styles of children in three ethnic groups in the United States. Journal of Cross-Cultural Psychology, 1974, 5, 212-219.

Robbins, M. C., DeWalt, B. R., & Pelto, P. J. Climate and behavior. A biocultural study. Journal of Cross-Cultural Psychology, 1972, 3, 331-344.

Rotter, J. B. Generalized expectancies for internal versus external control of reinforcement. Psychological Monographs, 1966, 80, (1, Whole No. 609).

Shade, B. J. Afro-American cognitive style: A variable in school success? Mimeographed paper, in press.

Triandis, H. C. Toward an analysis of the components of interpersonal attitudes. In C. Sherif & M. Sherif (Eds.) Attitudes, ego involvement, and change. New York: Wiley, 1967, 227-270.

Triandis, H. C. The analysis of subjective culture. New York: Wiley, 1972.

Triandis, H. C. Variations in black and white perceptions of the social environment. Urbana: University of Illinois Press, 1976.

Triandis, H. C. Interpersonal behavior. Monterey, Cal.: Brooks/Cole, 1977

Triandis, H. C. Values, attitudes and interpersonal behavior. In H. E. Howe & M. M. Page (Eds) 1979 Nebraska Symposium on Motivation. Lincoln, Nebr.: Univ. of Nebraska Press, 1980, 195-259.

Watson, O. M. Proxemic behavior. Paris, France: Mouton, 1970.

Whyte, W. F., & Braun, R. R. On language and culture. Manuscript, 1966.

Widiger, T. A., Knudson, R. M., & Rorer, L. G. Convergent and discriminant validity of measures of cognitive styles and abilities. Journal of Personality and Social Psychology, 1980, 39, 116-129.

Witkin, H. A., & Berry, J. W. Psychological differentiation in cross-cultural perspective. Journal of Cross-Cultural Psychology, 1975, 6, 4-87.

Wright, G. N., & Phillips, L. D. Cultural variation in probabilistic thinking: Alternative ways of dealing with uncertainty. International Journal of Psychology, 1980, 15, 239-257.

Table 1

Dimensions of the Conceptual Framework Discussed in Text

What perceptual differentiations are made?

- (XVII) What the other does vs what the other is--representative of a family ingroup, age, sex, race, religion, tribe, has status.
- (XV) Ingroup (family, nation, tribe, etc.)
- (XVI) Size of ingroup (narrow vs broad)
- (IX) Age
- (XIV) Sex
- (I.I) Language
- (I) Religion, Ideology
- (VII) Genetic stock--tribe, race
- (XI) Status (power, wealth, education, family connections)

How do people deal with the information they extract from these differentiations?

- 1. Ideologism vs Pragmatism (ethnocentrism is high-moderate)
- 2. Associative vs Abstractive Thought (probably correlated with specificity, field independence)
- 3.)
- 4.)- The self-concept (good vs moderately good; powerful vs weak,
- 5.) active vs passive)

Values

- 6. Human nature is good--neither--bad
- 7. Human nature is changeable--immutable
- 8. Mastery over nature--adaptiveness--subjugation to nature
- 9. Past-present-future
- 10. Doing-being-being in becoming
- 11. Power Distance
- 12. Uncertainty Avoidance--Tolerance for Ambiguity

13. Individualism--Collectivism

14. Ego (masculine) vs alter/environment (feminine) orientation

What do people do?

- (vi) Associative vs dissociative behaviors
- (xi) Superordinate vs subordinate behaviors
- (xiii) Intimacy vs formality (contact vs no contact) (emotional, Dionysian vs controlled Apollonian)
- (xii) Tight vs loose (precise behavior vs imprecise, uncertain)
- (x) Overt-covert
- (xiv) Differentiation by sex
- (ix) Differentiation by age
- (vii) Differentiation by race
- (xv) Differentiation by ingroup--family, nation, mankind depending on ingroup size (Familism)

Note: The handling of information dimensions are most numerous (14) and are designated by Arabic numerals; the corresponding dimensions in the perceptual domain are shown in capital Roman numerals; the corresponding dimensions in the behavioral domain are shown in lower case Roman numerals. Three dimensions in the perceptual domain do not have corresponding dimensions in the handling of information domain, but they do in the behavioral domain.

These dimensions are probably related to two dimensions often mentioned in the literature (modernity and complexity) in a hierarchical format such as this:

20. Modern Complexity

18. Complexity

19. Modernity

(other dimensions, see Table 2)

Table 2

The Structure of the Dimensions

Complex Modernity

Complexity

High: Nuclear family

Pragmatism

Associative and abstractive  
(situationally)

with emphasis on abstractive  
(field independent)

Past, present, or future  
orientation (situationally)

Mastery, harmony, or subjugation  
(situationally)

Little sex role differentiation;  
otherwise much role differen-  
tiation

Highly specific groups; precision  
in behavioral patterns

Moderate: Extended family

Ideologism

Associative (field dependent)

Uncertainty avoidance

Past orientation

Mastery orientation

Much role differentiation

Familism

Low: Nuclear family

Pragmatism

Abstractive (field independent)

Present orientation

Harmony or subjugation to  
nature

Little role differentiation

Modernity (High Correlated  
with Western Education)

High: Mastery over nature; doing

Large ingroups

Little differentiation by race,  
age, sex, tribe

Emphasis on achievement

Individualism

Future orientation

Openness to new experience

Time is important

World is calculable

Others who are different  
are respected

Distributive justice

Humans changeable

Moderate: Harmony with nature;  
being

Narrow ingroups

Much differentiation by race,  
sex, age, tribe, etc.

Masculinity

Emphasis on family

Familism

Past orientation

Others who are different are  
exploited

Low: Subjugation to nature

Little differentiation  
beyond tribe

Present orientation

Others who are different  
are suspected

**Footnote**

1. Valuable comments concerning an earlier draft were received from Joe Casagrande, Edmund Glenn, Geert Hofstede, and Judith Lisansky.

Distribution changed to correspond with  
Distribution List of 24 June 1981

DISTRIBUTION LIST

List 1 (Mandatory):

Defense Documentation Center  
ATTN: DDC-TC  
Accessions Division  
Cameron Station  
Alexandria, VA 22314

Library of Congress  
Science & Technology Division  
Washington, DC 20540

Chief of Naval Research  
Office of Naval Research  
Code 452  
800 N. Quincy St.  
Arlington, VA 22217

Commanding Officer  
Naval Research Laboratory  
Code 2627  
Washington, DC 20375

List 2 (ONR Field):

Commanding Officer  
ONR Branch Office  
1030 E. Green St.  
Pasadena, CA 91106

Psychologist  
ONR Branch Office  
1030 E. Green St.  
Pasadena, CA 91106

Commanding Officer  
ONR Branch Office  
536 S. Clark St.  
Chicago, IL 60605

Psychologist  
ONR Branch Office  
536 S. Clark St.  
Chicago, IL 60605

Commanding Officer  
ONR Branch Office  
Bldg. 114, Section D  
666 Summer St.  
Boston, MA 02210

Psychologist  
ONR Branch Office  
Bldg. 114, Section D  
666 Summer St.  
Boston, MA 02210

Office of Naval Research  
Director, Technology Programs  
Code 200  
800 N. Quincy St.  
Arlington, VA 22217

List 4 (NAVMAT & NPRDC):

Program Administrator for Manpower,  
Personnel, & Training  
HQ Naval Material Command (Code 08D22)  
678 Crystal Plaza #5  
Washington, DC 20370

Naval Material Command  
Management Training Center  
NMAT 09M32  
Jefferson Plaza, Bldg. #2, Rm. 150  
1421 Jefferson Davis Highway  
Arlington, VA 20360

Commanding Officer  
Naval Personnel R&D Center  
San Diego, CA 92152

Navy Personnel R&D Center  
Washington Liaison Office  
Building 200, 2N  
Washington Navy Yard  
Washington, DC 20374

List 7 (HRM):

Officer in Charge  
Human Resource Management Detachment  
Naval Air Station  
Alameda, CA 94591

Officer in Charge  
Human Resource Management Detachment  
Naval Submarine Base New London  
P.O. Box 81  
Groton, CT 06340

Officer in Charge  
Human Resource Management Division  
Naval Air Station  
Mayport, FL 32228

**Commanding Officer**  
Human Resource Management Center  
Pearl Harbor, HI 96860

**Commander in Chief**  
Human Resource Management Detachment  
U.S. Pacific Fleet  
Pearl Harbor, HI 96860

**Commanding Officer**  
Human Resource Management School  
Naval Air Station Memphis  
Millington, TN 38054

**Officer in Charge**  
Human Resource Management Detachment  
Naval Base  
Charleston, SC 29408

Human Resource Management School  
Naval Air Station Memphis (96)  
Millington, TN 38054

**Commanding Officer**  
Human Resource Management Center  
1300 Wilson Blvd.  
Arlington, VA 22209

**Commanding Officer**  
Human Resource Management Center  
5621-23 Tidewater Drive  
Norfolk, VA 23511

**Commander in Chief**  
Human Resource Management Division  
U.S. Atlantic Fleet  
Norfolk, VA 23511

**Officer in Charge**  
Human Resource Management Detachment  
Naval Air Station Ebey Island  
Oak Harbor, WA 98278

**Commanding Officer**  
Human Resource Management Center  
Box 23  
FPO New York 09510

**Commander in Chief**  
Human Resource Management Division  
U.S. Naval Force Europe  
FPO New York 09510

**Officer in Charge**  
Human Resource Management Detachment  
Box 60  
FPO San Francisco, CA 96651

**Officer in Charge**  
Human Resource Management Detachment  
COMNAVFORJAPAN  
FPO Seattle, WA 98762

**List 12 (Army):**

Army Research Institute  
Field Unit - Monterey  
P.O. Box 5787  
Monterey, CA 93940

Deputy Chief of Staff for  
Personnel, Research Office  
ATTN: DAPE-PBR  
Washington, DC 20310

Headquarters, FORSCOM  
ATTN: AFPR-HR  
Ft. McPherson, GA 30330

Army Research Institute  
Field Unit - Leavenworth  
P.O. Box 3122  
Fort Leavenworth, KS 66027

Technical Director  
Army Research Institute  
5001 Eisenhower Avenue  
Alexandria, VA 22333

**List 15 (Current Contractors):**

Dr. Clayton P. Alderfer  
School of Organization & Management  
Yale University  
New Haven, CT 06520

Dr. H. Russell Bernard  
Dept. of Sociology & Anthropology  
West Virginia University  
Morgantown, WV 26506

Dr. Arthur Blaiwes  
Human Factors Laboratory, Code N-71  
Naval Training Equipment Center  
Orlando, FL 32813

Dr. Michael Borus  
Ohio State University  
Columbus, OH 43210

Dr. Joseph V. Brady  
Division of Behavioral Biology  
The Johns Hopkins University  
Baltimore, MD 21205

Mr. Frank Clark  
ADTECH/Advanced Technology, Inc.  
7923 Jones Branch Drive, Suite 500  
McLean, VA 22102

Dr. Stuart W. Cook  
Institute of Behavioral Science  
University of Colorado  
Boulder, CO 80309

Mr. Gerald M. Croan  
Westinghouse National Issues Center  
Suite 1111  
2341 Jefferson Davis Highway  
Arlington, VA 22202

Dr. Larry Cummings  
Center for the Study of  
Organizational Performance  
Graduate School of Business  
University of Wisconsin-Madison  
1155 Observatory Drive  
Madison, WI 53706

Dr. John P. French, Jr.  
University of Michigan  
Institute for Social Research  
P.O. Box 1248  
Ann Arbor, MI 48106

Dr. Paul S. Goodman  
Graduate School of Industrial Administration  
Carnegie-Mellon University  
Pittsburgh, PA 15213

Dr. J. Richard Hackman  
School of Organization & Management  
Yale University  
56 Hillhouse Ave.  
New Haven, CT 06520

Dr. Asa G. Hilliard, Jr.  
The Urban Institute for Human Services, Inc.  
P.O. Box 15068  
San Francisco, CA 94115

Dr. Charles L. Hulin  
Department of Psychology  
University of Illinois  
Champaign, IL 61820

Dr. Edna J. Hunter  
School of Human Behavior  
United States Int'l University  
P.O. Box 26110  
San Diego, CA 92126

Dr. Rudi Klauss  
Syracuse University  
Public Administration Dept.  
Maxwell School  
Syracuse, NY 13210

Dr. Judi Komaki  
Engineering Experiment Station  
Georgia Institute of Technology  
Atlanta, GA 30332

Dr. Edward E. Lawler  
Battelle Human Affairs  
Research Centers  
P.O. Box 5395  
4000 N.E., 41st St.  
Seattle, WA 98105

Dr. Edwin A. Locke  
College of Business & Management  
and Dept. of Psychology  
University of Maryland  
College Park, MD 20742

Dr. Ben Morgan  
Performance Assessment Laboratory  
Old Dominion University  
Norfolk, VA 23508

Dr. Richard I. Mowday  
Graduate School of Management  
and Business  
University of Oregon  
Eugene, OR 97403

Dr. Joseph Olmstead  
Human Resources Research Organiz.  
300 N. Washington St.  
Alexandria, VA 22314

Dr. Thomas M. Ostrom  
Dept. of Psychology  
The Ohio State University  
116E Stadium  
404C West 17th Avenue  
Columbus, OH 43210

Dr. George E. Rowland  
College of Education  
Temple University, The Merit Center  
Ritter Annex, 9th Floor  
Philadelphia, PA 19122

Dr. Irwin G. Sarason  
University of Washington  
Department of Psychology  
Seattle, WA 98195

Dr. Benjamin Schneider  
Michigan State University  
East Lansing, MI 48824

Dr. Saul B. Sells  
Texas Christian University  
Institute of Behavioral Research  
Drawer C  
Fort Worth, TX 76129

Dr. H. Wallace Sinaiko, Program Director  
Manpower Research and Advisory Services  
Smithsonian Institution  
801 N. Pitt St., Suite 120  
Alexandria, VA 22314

Dr. Richard Steers  
Graduate School of Management and Business  
University of Oregon  
Eugene, OR 97403

List 16 (Consumers):

Lt. Col. Amilcar Vasquer  
Marin Corps  
Assistant of DASN(EO)  
Pentagon  
Room 5D824  
Washington, DC 20350

Cdr. Ken Johnson  
Navy Recruiting Command  
Ballston Tower #3  
Room 217  
Arlington, VA 22217

Capt. A. T. Eyler  
Department of the Navy  
Arlington Annex  
OP-15, Room G801  
Washington, DC 20370

Capt. John Avila  
Naval Military Personnel Command  
NMPC-61  
Washington, DC 20370

Dr. George E. Rowland  
College of Education  
Temple University, The Merit Center  
Ritter Annex, 9th Floor  
Philadelphia, PA 19122

Dr. Irwin G. Sarason  
University of Washington  
Department of Psychology  
Seattle, WA 98195

Dr. Benjamin Schneider  
Michigan State University  
East Lansing, MI 48824

Dr. Saul B. Sells  
Texas Christian University  
Institute of Behavioral Research  
Drawer C  
Fort Worth, TX 76129

Dr. H. Wallace Sinaiko, Program Director  
Manpower Research and Advisory Services  
Smithsonian Institution  
801 N. Pitt St., Suite 120  
Alexandria, VA 22314

Dr. Richard Steers  
Graduate School of Management and Business  
University of Oregon  
Eugene, OR 97403

List 16 (Consumers):

Lt. Col. Amilcar Vasquer  
Marin Corps  
Assistant of DASN(EO)  
Pentagon  
Room 5D824  
Washington, DC 20350

Cdr. Ken Johnson  
Navy Recruiting Command  
Ballston Tower #3  
Room 217  
Arlington, VA 22217

Capt. A. T. Eyler  
Department of the Navy  
Arlington Annex  
OP-15, Room G801  
Washington, DC 20370

Capt. John Avila  
Naval Military Personnel Command  
NMPC-61  
Washington, DC 20370

Dr. Arthur Stone  
State University of New York  
at Stony Brook  
Department of Psychology  
Stony Brook, NY 11794

Dr. James R. Terborg  
University of Houston  
Department of Psychology  
Houston, TX 77004

Drs. P. Thorndyke and M. Weiner  
The Rand Corporation  
1700 Main Street  
Santa Monica, CA 90406

Dr. Howard M. Weiss  
Purdue University  
Department of Psychological  
Sciences  
West Lafayette, IN 47907

Dr. Philip G. Zimbardo  
Stanford University  
Department of Psychology  
Stanford, CA 94305